1919. 1919.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

BOROUGH OF

CLIFTON DARTMOUTH HARDNESS.

DARTMOUTH:

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For 1919.

To His Worship the Mayor and the Aldermen and Councillors of the Borough of Clifton Dartmouth Hardness.

Gentlemen,

In accordance with my statutory duties I have the honour to present to you my Annual Report upon the Health of the Inhabitants, and the Sanitary condition of the Borough. The Report also contains details of the administration of the Factory and Workshops Act, 1901, as required by the Secretary of State for the Home Department.

The Town of Dartmouth is so situated that it is surrounded by hills on all sides, with the exception of the River frontage, in fact it is built on the sides of the hills, sloping down to the water, so that the natural slope gives a direct fall for the drainage from the houses to gravitate to the River into which the sewer pipes empty. The only difficulty is a low-lying portion of the town, which is reclaimed ground, and was made by filling in a creek where the level of the ground is somewhat below the tide level. This portion is liable to be flooded during the high spring tides, when there is a large quantity of water coming down the valley from the hills, caused by heavy rains. This is overcome by collecting and pumping but occasionally the area is flooded.

The chief occupations of the inhabitants consists in the coaling of vessels coming into the harbour for coal, in engineering and small boat building, also a large number are employed on the Royal Naval College, none of which occupations are likely to have any deleterious influence on public health.

The population of the Borough at the census of 1911 was 7,005, but this has been corrected by the Registrar-General, from which all non-civilian males, whether serving at home or abroad are excluded, and the numbers for the year are for deaths, 5,579, and for births, 6251, which is intended to include all the elements of the population contributing to the birth and marriage rates. It is on these numbers I have based the statistical rates.

The area of the Borough is 1,925 acres, and the density of the population is 3.6 per acre. The number of inhabited houses at the 1911 census was 1,152, the bulk of which are very small rentals.

The natural increase, that is, the excess of births over deaths is 15.

During the year 83 deaths have been registered, consisting of 41 males and 42 females, giving a crude death rate of 13·5 per 1000 of the estimated population. From this number must be deducted 5, as deaths not belonging to the district, which gives a corrected death rate of 12·7 per 1,000 of the estimated population for the year. The various causes of these deaths are as follows :—

Disease	Male	Female	Total
Diphtheria	1	4	5
Influenza	0	1	1
Pulmonary Tuberculosis ...	2	5	7
Meningeal ,, ...	1	0	1
General ,, ...	1	0	1
Cancer	3	5	8
Heart Disease	0	3	3
Bronchitis	3	1	4
Pneumonia	2	1	3
Other Respiratory Diseases ...	0	1	1
Appendictis	1	0	1
Nephritis	2	2	4
Congenital Debility	1	1	2
Violence (apart from Suicide) ...	4	0	4
Suicide	2	0	2
Other defined Diseases ...	18	18	36
	41	42	83

3 deaths have been registered of children under 1 year of age, giving an infantile birth rate of 30.6 of the births registered. The causes of these deaths have been from general diseases, leaving nothing special to comment upon.

5 deaths have been registered from zymotic disease, viz: diphtheria. An epidemic of this disease has been present in the district during the latter half of the year, which will be referred to later on.

8 Inquests have been held: 2 cases of suicide, 4 from violent deaths, and 2 from natural causes.

98 births have been registered—54 males and 44 females; of these 93 were legitimate, and 5 illegitimate, giving a birth rate of 15.3 per 1,000 of the estimated population for the year.

191 cases of infectious diseases have been notified under the notification of Infectious Diseases Act, during the year, viz:

Diphtheria	...	88
Scarlet Fever	...	29
German Measles	...	46
Measles	...	9
Erysipelas	...	8
Malaria	...	6
Pneumonia	..	3
Dysentery	...	1
Para Typhoid	...	1

The epidemic of diphtheria commenced in July, being imported into the town by a family coming from London, who had a carrier with them. The cases were isolated in the house and anti-toxin given. The second case occurred in the same street, a month afterwards. I found on enquiry that no communication had taken place between the two families. A case was notified on August 17th in another part of the town. There I found a carrier had come to Dartmouth from another part of the Kingdom. The infection spread, and by the end of the year 88 cases had been notified.

The disease has been of a very mild type, being mostly pharyngeal. There has been no laryngeal case requiring tracheotomy, but I am of opinion that there have been many undiscovered cases. Owing to the mildness of the disease the parents have not called in the doctor and no notice has been taken of the illness, the child has been allowed to run about and be a carrier. The Isolation Hospital was not opened at first when it should have been—the first case going in on December

5th. Anti-toxin was distributed to the medical men and used on the known cases; swabs were taken of these cases and sent to the County Laboratory for verification, also at the end of the illness, before the cases were declared free from infection.

When the attendance at the schools was reduced to 60% I recommended the Sanitary Authority to have all the schools closed, also the places of entertainment to all under 14 years of age. The height of the epidemic was during the months of October (when there were 26 cases notified—and November—when there were 37 cases notified. During that period we had very cold east winds, which caused the children to crowd into their homes for warmth and shelter, not being able to remain out of doors as in the milder weather, and it is very noticeable that the numbers dropped to 12 during December when the weather became milder. Certainly the schools were closed, but the children were congregating about and playing in the streets.

There is one very possible cause of spreading the disease, that is, the ash receptacles that are placed in the street in the morning for the scavenging carts to remove. Whilst waiting for the cart they are often turned over and the contents scattered, the high wind blowing the ashes and other matter which would hold the germs of the disease about, and are easily inhaled by passers by. The same theory also holds good where mats and carpets are beaten or shaken outside the houses in the street, which I constantly see being done. Also another factor, and a very powerful one, is the dampness of the walls of the houses in the low lying parts of the town.

Scarlet fever, measles, and german measles accounted for 84 of the notified cases. I group them together, although they were notified under the different diseases named scarlet fever, german measles, and measles, by the different practitioners. I was of opinion, myself, that they were all cases of german measles. This disease closely resembles scarlet fever, and in its severe type can easily be mistaken for it. On visiting the cases that were notified to me as scarlet fever I found enlargement of the post cervical glands which is peculiar to german measles, malaria and dysentery. These cases occurred amongst ex-service men returned from the east where they had contracted the disease.

The cause of the case of para typhoid could not be traced; the patient had been in the east during the war.

The erysipelas cases were due to infection, the cause being slight injuries.

Tuberculosis.

Under the Public Health (Tuberculosis) Regulations, 1908, 18 cases of the disease have been notified, with 7 deaths. Tuberculosis is the most universal scourge of the human race. The mortality in this country being about 12 per cent., and one of the chief causes of the spreading of the disease is DUST. Patients with advanced pulmonary tuberculosis throw off in the sputum they expectorate countless millions of bacilli daily, which being expectorated and allowed to dry, the sputum rapidly becomes dust, and is distributed by the movement of the air far and wide. This dust is in the open, in living rooms, sleeping rooms, school rooms, and places of entertainment, in fact, everywhere where people congregate, but it is most especially dangerous in living and sleeping rooms where the air becomes stagnant and foul from the want of ventilation, and is being breathed over and over again. Tubercle Bacilli are found in the dust collected from crevices and ledges in the walls of rooms occupied by the diseased, and the infection is readily transmitted to those healthy persons who come into these rooms for the disease is no respector of person or age. The constant supply of fresh air and free ventilation in all living and sleeping rooms is an absolute necessity, which, in a number of houses in the borough, is impossible. It should be impressed upon the people, the infected persons especially, not to spit about on floors, into fire places, or in the open, but to use a small flask which could be carried in the pocket, and, when full, emptied directly into the fire, and that infected persons should spend the bulk of their time out of doors—a very difficult matter for those who are living in towns, working in shops, and offices. One sees the great improvement in health these sufferers make when sent for treatment to a sanatorium, and how quickly they relapse to their former state of ill health as soon as they return to their home surroundings and sedentary business, therefore one of the most important factors in the attempt to stamp out this terrible scourge to mankind is to insist on the houses used for habitation being in a high state of sanitary fitness, especially in ventilation, sunshine and house drainage, for as long as human beings have to congregate in towns to live, and the dwelling houses are not in good sanitary condition so long will tuberculosis spread amongst them.

The Isolation Hospital was opened on December 5th, 1919. It contains six beds, and has been used exclusively for the diphtheria cases, but to render it more efficient, and to cope with more than one infection at a time, and for the separation of the sexes, the hospital should be added to: that is, more huts erected and an administrating block in which a permanent caretaker could reside,

but I understand the surrounding Urban and Rural Districts of Kingsbridge, Totnes, Salcombe and Brixham are meeting with a view to erecting a central Isolation Hospital for combined use with Dartmouth.

The Housing Accommodation.

This is a very serious question at this period owing to the excessive cost of material and the uncertainty and cost of labour, also the fact that there has been no building during the past five years. The larger portion of the housing accommodation for the working classes is in the older houses of the town, most of which are divided up into tenements, and these buildings are so situated and packed in, that there is not sufficient air space around them for light, air and sunshine to penetrate, they must be used and occupied until better ones can be provided, but there is no reason why notices should not be served upon the owners to put these houses in order by repairing broken pavements in courtyards, broken steps, floors, windows, ceilings, roofs, gullies and water chutes; whitewashing, distempering and painting; also repair of water-closet seats, and attending to the general cleanliness of their property. Much could be done to render the condition of the occupiers more comfortable. This is what the Sanitary Inspector should do: scheduling what is necessary to be done, then serving the notice upon the owner calling upon him to do the work, and if he declines to do it, the Council has powers under the Public Health Act to enforce him.

From a public health point of view a large number of these houses should be condemned as unfit for habitation, not only from their structural defects, but mainly for their position and method of building. Take Lake Street, for instance, and Undercliff, where the houses are built into the bank up to the eaves of the roof in some cases, but chiefly up to the first floor. Many of the better class houses in South Town and on the hill are in the same state—a condition which always causes the wall on that side of the house to be damp, or streaming with water. Still much could be done to render the houses more habitable until new houses can be built.

When the scheme devised by the Council for building new houses will mature and begin to develop I do not know, but it is quite time something was done if the working classes are to be housed in a proper manner, and then a lot of these old dwellings should be re-constructed if possible or demolished.

Water Supply.

Owing to the long drought during the past summer the water supply was considerably curtailed, but as soon as the rain set in the water, which is chiefly surface, spring, and stream, was again in good supply.

The supply is from six sources, five of which give their supply by gravitation, and from one it is pumped from the source to the collecting reservoir. The sources are :—

1. Guttery meadow, collecting a spring, which is delivered unfiltered.
2. Townstal ; spring water, delivered unfiltered.
3. Crosby meadow ; spring water, delivered unfiltered.
4. Lapthorne ; springs, passing through a sand filter.
5. Bozomzeal; ,, ,, ,, ,, ,,
6. Old Mill Stream ; this water is passed through a sand filter before being pumped to the reservoir.

The whole of these sources have been analysed bacteriologically during the year. The result of the examination is as follows :—

Guttery meadow :—

1. Quantitative. The average number of organisms, producing visible colonies on gelatine plate, incubated at 20° C for 3 days is found to be 73 per c.c.

The average number of organisms producing visible colonies on agar plate incubated at 37·5° C. for 2 days is found to be 25 per c.c.

2. Qualitative. B. Coli present in 25 c.c.
Streptococci present in 10 c.c.
B. Enteritides sporogenes not found in 100 c.c.

The result would indicate that some excremental matter has obtained access to the water at some fairly recent date, but it must be in comparatively small amounts. This is an unfiltered water, and the probability is that the contamination is due to the cattle in the field where the catch-pit is.

Old Townstal supply :—

1. Quantitative. The average number of organisms producing visible colonies on gelatineplates incubated at 20o C. for 3 days is found to be 116 per c.c.

The average number of organisms producing visible colonies on agar plates incubated at 37·5° C. for 2 days is found to be 21 per c.c.

2. Qualitative. B. Coli not found in 100 c.c.
Streptococci not found in 30 c.c.
B. Enteritides Sporogenes present in 50 c.c.

The presence of the small number of B. Euteritides Sporogenes does not necessarily indicate sewage pollution, possibly they are derived from earthy matter This is also an unfiltered water.

Crosby meadow :—

1. Quantitative. The average number of organisms producing visible colonies on gelatine plate incubated at 20° C. for 3 days is found to be 36 per c. c.

The average number of organisms producing visible colonies on agar plate incubated at 37·5° C. for 2 days is found to be 5 per c. c.

2. Qualitative. B. Coli not found in 100 c. c.
Streptococci not found in 30 c. c.
B. Enteritides Sporogenes not found in 100 c. c.

The above data are very satisfactory and there is no evidence of sewage pollution. This is an unfiltered water.

Lapthorne Supply:

1. Quantative. The average number of organisms producing visible colonies on gelatine plates incubated at 20° C. for 3 days is found to be 22 per c.c.

The average number of organisms producing visible colonies on Agar plates incubated at 37·5° C for 2 days is found to be 10 per c.c.

2. Qualitative. B. Coli not found in 100 c.c.
Streptococci not found in 30 c.c.
B. Enteritides Sporogenes present in 50 c.c

The presence of these spores could hardly be regarded as evidence of sewage pollution, as the water is so good in other respects. We should regard it as more probable that they are derived from surface matter washed in as a result of the recent heavy rains.

Bozomzeal Supply:—

1. Quantitative. The average number of organisms producing visible colonies on gelatine plates incubated at 20° C. per 3 days is found to be 308 per c. c.

The average number of organisms producing visible colonies on agar plates, incubated at 37·5° C. for 2 days is found to be 167 per c.c.

2. Qualitative. B. Coli present in 10 c.c.
Streptococci present in 10 c.c.
B. Enteritides Sporogenes present in 25 c.c.

Apparently there is some sewage contamination of this water, and it is not fit for drinking purposes in its present condition. This supply, showing such a bad result on analysis, should be excluded from the general supply, until the source of the pollution has been cut off, and the water found to be pure.

Old Mill supply :—

1. Quantitative. The average number of organisms producing visible colonies on gelatine plates incubated at 20° C. for 3 days is found to be 103 per c.c.

The average number of organisms producing visible colonies on agar plates incubated at 37·5° C for 2 days is found to be 15 per c.c.

2. Qualitative. B. Coli present in 50 c.c.
Streptococci present in 10 c.c.
B. Enteritides Sporogenes present in 50 c.c.

There are small numbers of excremental organs present in this sample, and this would apparently indicate that the filtration is not quite sufficient at present. This water is not satisfactory in its present condition.

It is very evident on this analysis that the condition and purity of the water for drinking purposes is not all it should be, and I think that as long as the supply is obtained by gathering several small sources—such as is done now—and mixing them together in the reservoirs with inadequate filtering, and in some cases no filtering at all, considering all the waters used are surface springs and streams running through cultivated land with farms on it, the sources of pollution are not likely to be stopped. It would be preferable if some portion of the watershed could be dammed off and a collecting lake formed, the ground around being acquired and put out of cultivation and the dwellings on it demolished, so that the water could be drained from unpolluted land, and if collected sufficiently high up could be brought down by gravitation, and so obviate the costly system of pumping.

There is also another and smaller supply, called the St. Petrox supply, derived from a spring which rises on Swannaton Farm, and is piped to a closed filter bed. It is supplied to the public

conduits and some thirty houses in South Town. I think it would be advisable to have a bacteriological examination made of the water as one has not been made for some years.

A large number of the houses have the Corporation Water Supply in them, but the poorer houses and many of the tenements have no water supply laid on, but are dependent upon the public conduits for their water, which they have to carry in pails and pitchers, and store in their rooms in small quantities—a most unwholesome procedure. Every house—and in tenements, every landing—should have water laid on, and also every water closet should be supplied, so that hand flushing, which is only done occasionally, could become a thing of the past.

The Milkshops and Dairies have all been visited and inspected during the year, and found to be fairly satisfactory, but in several of the dairies defects were found such as defective floors, the windows and ventilator openings not covered with gauze or muslin to keep flies, etc., out; and also the storage of other material, besides milk and butter, in the dairy, such as harness, lamps, empty bottles, casks, raw vegetables, and such like. The occupier's attention has been drawn to these matters and they have been remedied? But the dairies and milkshops require constant visiting and supervision to obviate these occurrences.

The requirements of the Food and Drugs Act have been carried out by Police Sergt. A. Leach. 14 samples of food have been taken and sent to the Public Analyst during the year, viz.: new milk, 8 samples; butter, 1; cheese, 1; lard, 1; jam, 1; tea, 1; pepper, 1. All these were returned as genuine.

The cowsheds have been inspected, and a great deal of work requires to be done to render them up to date and satisfactory. They are, for the most part, old barns converted, or very old, small, low farm buildings—dark, ill ventilated and badly supplied with water, and some are simply lean-to sheds. They all require new floors, properly laid and drained; the lower part of the walls rendered smooth, impervious, and readily washable. Also the ventilation and lighting is very bad and requires attention. The walls should be limewashed twice a year, but the walls being of rough stone with large interspaces the dirt and splashings get in and make the place very dirty. Also water should be laid on. At present they are very unsatisfactory.

The Bakehouses have been visited and inspected; there are ten of them, and their condition has not altered much. There is room for great improvement in most of them, especially as to cleanliness. Floors require re-paving, the walls are broken

away, and dirt accumulates; also the tendency to store miscellaneous rubbish in the bakehouses is great. (Here is great scope for the sanitary inspector.) There are no underground bakehouses.

There are no common lodging houses, in the town.

There are four private slaughter houses, and the public abattoir, all of which have been visited and inspected during the year. I find they are dirty—that is, the men, after slaughtering do not clear away the mess made, so that the blood, grease, and excrement, which is splashed about on the floors and walls, is not washed off, but remains, and is added to every time killing goes on. If the butchers could only be made to see that their men cleaned up properly after the work was done matters would be considerably better. There is also the trouble of the blood and offal accumulating on the land in the vicinity of the slaughter hsuses, it is not carried far enough away and scattered over the land. No diseased carcases have been found or known of, but there is no supervision whilst killing is in progress. I would strongly suggest that the water from the well at the public abattoir should be analysed, as this is the water which is used for washing the carcases whilst being dressed, and owing to the proximity to the slaughter house, is in a very fair way be polluted. It is also possible to be used as drinking water, and, in my opinion, is a source of danger.

The refuse disposal is still carried out by the emptying of a receptacle, placed on the pavement, containing the refuse, outside the house, into a cart, and carrying it 3 miles into the country, to be tipped on agricultural land. I consider this method should be abandoned, and a destructor substituted. The collection of the refuse outside the houses causes a great nuisance, because the receptacles are frequently upset by dogs searching for food in them, or by some other means, and the contents are scattered about the roads for the best part of the day. Also the high winds blow it about, and render it a source of danger, irrespective of its making the paths and gutters dirty. Also another danger is the great accumulation of rats at the tip, which, in time, will become a menace to the public by the possible infection of plague.

The administration of the Factory and Workshops Act, 1901, in connection with factories, work places, workshops and home work. Inspection of the workshops have been made during the year, and everything has been found satisfactory and the abstract of the Act has been posted up in all cases. No nuisances have been discovered, and all the premises meet with the requirements of the Act. No prosecutions have taken place during the year. No lists of out-workers have been sent to me, and no case of infectious disease has been traced to any of the workshops.

INSPECTION OF FACTORIES, WORKSHOPS, AND WORKPLACES

Including Inspections made by Sanitary Inspectors.

	No. of Inspections.	No. of Written Notices.	No. of Prosecutions.
Factories (including Factory Laundries)	10	0	0
Workshops (including Workshop Laundries)	5	0	0
Workplaces (other than Outworkers' Premises ...	1	0	0
Total ...	16	0	0

DEFECTS FOUND IN FACTORIES, WORKSHOPS, & WORKPLACES.

Particulars.	No. of Defects. Found.	Remed'd	Referred to H.M. Inspect'r	Number of Prosecutions.
Nuisances under the Public Health Acts :—				
Want of cleanliness	Nil.			
Want of ventilation				
Overcrowding				
Want of drainage of floors				
Other Nuisances				
Sanitary Accommodation. insufficient				
Sanitary Accommodation. unsuitable or defective..				
Sanitary Accommodation. not separate for sexes..				
Offences under the Factory and Workshop Acts				
Illegal occupation of underground bakehouses (s. 101)				
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ..				
Other Offences .. .. (Excluding offences relating to outwork)				
Total				

OUTWORKERS' LISTS, SECTION 107.

Lists received from Employers sending once in the year :—

Wearing Apparel—	Lists.	Contractors.	Workmen
Making, &c., cleaning and washing ...	0 ...	0 ...	0

REGISTERED WORKSHOPS.

Workshops on the Register (s. 3) at the end of the year.

Bakehouses	10
Tailors	6
Dressmakers ...	9
Plumbers and Painters	5
Builders and Carpenters ...	8
Printers	3
Aerated Water Works	1
Engineers	4
Other Works	27
Total Number of Workshops on Register	73

OTHER MATTERS.

Matters notified to H.M.'s Inspector of Factories :—

Failure to affix Abstract of the Factory and Workshops Acts (s. 133)	Nil
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshops Act (s. 5) — Notified by H.M. Inspector	Nil
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshops Act (s. 5) — Reports (of action taken) sent to H.M. Inspector.	Nil
Other	Nil
Underground Bakehouses (sec. 101) :—	
Certificates granted during the year	Nil
In use at the end of the year	Nil

The Vaccination Returns for the year are as follows:

Successfully vaccinated	53
Insusceptible to vaccination ...	0
Conscientious objections... ...	49
Died unvaccinated	1
Unvaccinated under six months old ...	0
Unvaccinated over six months old ...	0
Postponed by Medical Certificate ...	0
Removed out of the district ...	0
	103

I have the honour to be, Gentlemen,

Your obedient servant,

JOHN H. HARRIS, M.D., D.P.H.,

Medical Officer of Health.

March, 1920.